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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CABRERA, ZOILA E	

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/613,252	HRANICA ET AL.	
	Examiner	Art Unit	
	Zoila E. Cabrera	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8-22,25-28 and 31* is/are rejected.

7)☒ Claim(s) *6-8,16,17,23,24,29 and 30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusmierczyk et al. (US 6,502,294 B2) in view of Englhardts et al. (US 2005/0273191 A1)

Regarding claims 1, 11 and 13 Kusmierczyk discloses:

1. A method of inspecting a selected workpiece during a production run in which workpieces are supplied to a plurality of workstations, said method comprising the steps of: (a.) performing a control routine that controls the movement of the workpieces to and from the workstations, said control routine operating in a series of cycles (Col. 4, lines 20-30; Col. 3, lines 65-67; Col. 5, lines 51-55); (b.) generating a signal requesting the selected workpiece from a selected one of the workstations (Col. 4, lines 34-44; Col. 5, lines 35-38); (c.) in response to the signal, interrupting the performance of the control routine at the end of the then

current cycle and moving the selected workpiece from the selected one of the workstations to a quality control station (Col. 5, lines 38-67); (d.) resuming the performance of the control routine (Col. 5, lines 67- Col. 6, line 3); (e.) inspecting the selected workpiece after step (d) (Col. 6, lines 23-25); (f.) determining whether the selected workpiece is acceptable; (g.) if the selected workpiece is acceptable, transporting the selected workpiece to an output area (Col. 6, lines 27-31, it is inherent that the workpiece would be acceptable in order to continue machining the workpiece); and (h.) interrupting the control routine at the end of the then current cycle and moving the selected workpiece from the quality control station to the output area (Col. 6, lines 27-31, output area corresponds to the entry end).

11. The method of claim 1, wherein the control routine is performed by a programmable logic controller (Col. 3, lines 46-59).

13. The method of claim 1, wherein the control routine is predetermined (Col. 4, lines 1-7).

Kusmierczyk discloses the limitations of claims 1, 11 and 13 above but fails to disclose generating a second signal indicating that the selected workpiece is ready to be transported to an output area. However, Englhardt discloses that if no error conditions are found on substrates or substrates a transport system returns the carrier to either a subsequent tool or stocker (or output area). See Englhardt ([0090]; Fig. 4). Therefore, it would have been obvious to a person of

the ordinary skill in the art at the time the invention was made to have used an automatic transport system after an inspection is carried out as taught by Englhardt because it would provide an improved system that would maximize yield of the products.

3. Claims 2-5, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusmierczyk et al. (US 6,502,294 B2) and Englhardt (US 2005/0273191) and further in view of Katsuura et al. (US. 6,324,749).

Kusmierczyk and Englhardt discloses the limitations of claim 1 and further discloses the limitations of claim 3-5 as follows:

3. The method of claim 2, wherein the desired one of the workstations is the selected one of the workstations (Col. 6, lines 42-51).

4. The method of claim 2, further comprising the step of: (k.) informing the control routine that workpieces should not be delivered to the selected one of the workstations; and wherein step (k.) is performed between steps (c.) and (d.) (Col. 3, lines 31-36).

5. The method of claim 4, wherein step (k.) is performed by placing the selected one of the workstations in a bypass mode (Col. 3, lines 31-36).

However, Katsuura fails to disclose the limitations of claims 2 and 9-10. However, Katsuura discloses such limitations as follows:

2. The method of claim 1, further comprising the steps of: (i.) if the selected workpiece is not acceptable, generating a third signal indicating that the selected workpiece is ready to be transported to a desired one of the workstations; and (j.) in response to the third signal, interrupting the control routine at the end of the then current cycle and moving the selected workpiece from the quality control station to said desired one of the workstations (Fig. 1, From Inspection Station to Repair Station).

9. The method of claim 1, wherein step (e) is performed on a stand alone jig, outside the quality control station (Fig. 3, Inspection Stations; Inspection Method Gauge).

10. The method of claim 1, wherein the workpieces are automotive crankshafts (Fig. 1, Interior equipment Zone; Col. 3, lines 42-46).

Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the transfer line workpiece of Kusmierczyk and Englhardt with the vehicle assembly line of Katsuura because it would provide an improved automotive assembly line which can promptly identify an improper assembly (Katsuura, Col. 1, line 66- Col. 2, line 3).

4. Claims 12, 14, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusmierczyk et al. (US 6,502,294 B2) and Englhardt and further in view of McCulloch (US 5,193,662)

Regarding claims 12, 14, and 21, Kusmierczyk and Englhardt disclose the limitations of claim 1 above. The same citations applied to claim 1 above apply as well for claim 21. Kusmierczyk further discloses most of the limitations of claim 14 as follows:

14. A method of inspecting a first workpiece during a production run in which workpieces are supplied to a plurality of workstations, said method comprising: (a.) moving the first workpiece from an input area to a first workstation using the autoloader (Col. 3, lines 24-30); (b.) moving the first workpiece from the first workstation to a quality control station using the autoloader (Col. 5, lines 38-67); (c.) inspecting the first workpiece after step (b.) (Col. 5, lines 63-67); (d.) after step (b.), moving a second workpiece from the input area to a second workstation using the autoloader (Col. 4, lines 44-48); (e.) determining whether the first workpiece is acceptable; and (f.) if the first workpiece is acceptable, moving the first workpiece from the quality control station to an output area using the autoloader (Col. 6, lines 27-51).

However, Kusmierczyk fails to specifically disclose an autoloader comprising a carriage movably mounted to a guidance structure. But McCulloch discloses a guide structure

for lift and carry conveyors or autoloader (Abstract). Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the teachings of Kusmierczyk with the system of McCulloch because it would provide an improvement in guide structure for lift and carry conveyor systems (Col. 1, lines 6-7).

5. Claims 15, 18-20, 22, 25-28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kusmierczyk, Englhardt and McCulloch as applied to claims 14 and 21 above and further in view of Katsuura et al. (US. 6,324,749).

Regarding claims 15, 18-20, 22, 25-28 and 31, Kusmierczyk and McCulloch disclose the limitations of claims 14 and 21 above but fail to disclose the limitations of claims 15, 18-20, 22, 25-28 and 31,. However, Katsuura discloses such limitations as follows:

15. The method of claim 14, further comprising the step of: (g.) if the first workpiece is not acceptable, moving the first workpiece from the quality control station to a third workstation using the autoloader (Fig. 1, From Inspection Station to Repair Station).

18. The method of claim 14, wherein step (c) is performed on a stand alone jig, outside the quality control station (Fig. 3, Inspection Stations; Inspection Method Gauge).

19. The method of claim 14, wherein the workpieces are automotive crankshafts (Fig. 1, Interior equipment Zone; Col. 3, lines 42-46).

20. The method of claim 14, wherein the workstations all perform the same type of operation (Fig. 1, each zone includes machines that perform same type of operation).

22. The method of claim 21, further comprising the step of: (g.) if the selected workpiece is not acceptable, interrupting the control of the supply of workpieces in accordance with the control routine at the end of the then current cycle and moving the selected workpiece from the quality control station to another one of the workstations using the autoloader (Fig. 1, From Inspection Station to Repair Station).

25. The method of claim 21, wherein the workpieces are automotive crankshafts (Fig. 1, Interior equipment Zone; Col. 3, lines 42-46).

As for claims 26-28, and 31 the same citations applied to claims 1-2, 14, 19, 21, above apply as well for claims 26-28 and 31. Please note that Katsuura discloses different zones wherein an autoloader would be transferring workpieces from zone to zone (Fig. 1).

Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the teachings of Kusmierczyk and McCulloch with the assembly line of Katsuura because it would provide an improved

automotive assembly line which can promptly identify an improper assembly (Katsuura, Col. 1, line 66- Col. 2, line 3).

Allowable Subject Matter

6. Claims 6-8, 16-17, 23-24, and 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning communication or earlier communication from the examiner should be directed to Zoila Cabrera, whose telephone number is (571) 272-3738. The examiner can normally be reached on M-F from 8:00 a.m. to 5:30 p.m. EST (every other Friday).

If attempts to reach the examiner by phone fail, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749. Additionally, the fax phones for Art Unit 2125 are (703) 872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist at (703) 305-9600.

Zoila Cabrera
Patent Examiner
5/1/06